THE MAGIC & MAJESTY OF WATER

THE NATURAL ECO-TECHNOLOGICAL THEORIES OF VIKTOR SCHAUBERGER

by Callum Coats

These theories of Viktor Schauberger afford new insights into naturally correct water management, its proper handling, conduction, storage and self-purification by means which retain and enhance water's natural energies and health. The close interrelationship between water and the forest (as a water producer—not a water consumer) and the problems of soil salinity—how this comes about through over-exposure of the soil to the radiance of the sun by deforestation—are also addressed, and indications are given as to how these may be avoided and overcome, due to Viktor Schauberger's radical and fundamentally new understanding of the coming into being and functioning of the groundwater table in relation to soil temperature.

As a natural organism, water is formed and functions according to nature's laws and geometry, the latter exhibiting none of the elements of the straight line, circle and point, the basis of modern mechanical and technological constructs. Reflecting nature's principal constant, namely that of continuous change and transformation, the vortex epitomises this form of open, fluid and flexible motion. Through his study of the vortices occurring naturally in flowing water and in the air in the form of cyclones and tornadoes, Viktor Schauberger developed his theories of implosion. It was through the research and development of these theories that he was able to generate considerable energies in water and air and to transport timber and other substances heavier than water, down the central axis of a watercourse.

In listing some of his accomplishments one could not do better than to quote from his book, *Our Senseless Toil*, written in 1933:

 "It is possible to regulate watercourses over any given distance without embankment works; to transport timber and other materials, even when heavier than water, for example ore, stones, etc., down the centre of such watercourses; to raise the height of the water-table in the surrounding countryside; and to endow the water with all those elements necessary for the prevailing vegetation."

 "Furthermore it is possible in this way to render timber and other such materials non-inflammable and rot-resistant; to produce drinking and spa water for man, beast and soil of any desired composition and performance artificially, but in the way that it occurs in nature; to raise water in a vertical pipe without pumping devices; to produce any amount of electricity and radiant energy almost without cost; to raise soil quality; and to heal a variety of physical disorders.

• "...the practical implementation of this...would without doubt signify a complete reorientation in all areas of science and technology. By application of these new-found laws, I have already constructed fairly large installations in the spheres of log-rafting and river regulation which, as is already known, have functioned faultlessly for a decade, and which today still present insoluble enigmas to the various scientific disciplines concerned."

Water and its vital interaction with the forest was his principal preoccupation, viewing water as a living entity, the 'blood of Mother Earth', born from the womb of the forest. The mechanistic, materialistic and extremely superficial way of looking at things impressed on us at school, however, precludes us from thinking that water is anything other than inorganic, i.e., supposedly without life, but which, while apparently having no life itself, can neverthe-less miraculously engender the life we find today in all its forms. Life is movement and is epitomised by water, which both externally and internally is in a constant state of motion and transformation. In confirmation of this fact, water is able to combine with more substances than any other single molecule and is responsible for the myriad life-forms extant on this planet, flowing as water, sap and blood. How then could it ever be construed as lifeless in accordance with the chemist's cold, clinical view of water, defined as the inorganic substance H2O?

This cryptic appellation is a gross misrepresentation for, according to Viktor Schauberger, in addition to the more familiar categories of water, there are as many varieties of water as there are animals and plants. Were water merely the sterile, distilled H_2O as claimed by science, it would be poisonous to all living things. H_2O is actually 'juvenile water', newborn, with no developed character, and having no traits other than total purity. As a young, immature, growing entity, it grasps like a baby at everything within reach, absorbing the characteristics and properties of whatever it comes into contact with or has attracted to itself in order to make itself whole; the 'everything'—the so-called impurities taking the form of trace elements, minerals, salts and even smells! Like a growing child, juvenile water takes and does not give. Only when mature, i.e., when suitably enriched with raw materials, is it in a position to give, to dispense itself freely and willingly, so as to enable the rest of life to develop. Before the birth of water, life was not.

But what is this marvellous, colourless, tasteless and odourless substance, which quenches our thirst like no other liquid? Did we but truly understand the essential nature of water—a living substance—we would not treat it so churlishly, but would care for it as if our lives depended on it, which undoubtedly they do.

• "The upholder of the cycles which supports the whole of life, is WATER. In every drop of water dwells the Godhead, whom we all serve; there also dwells life, the soul of the 'first' substance—waterwhose boundaries and banks are the capillaries that guide it and in which it circulates."

• "More energy is encapsulated in every drop of good spring water than an average-sized power station is presently able to produce."

Indeed, in accordance with the famous Hasenöhrl-Einstein equation $E = mc^2$, in 1 gram of substance, or 1 cm³ of water, 25 million

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kilowatt hours of energy are stored!

Water is a being that has life and death, which through incorrect, ignorant handling becomes diseased, imparting this condition to all organisms, vegetable, animal and human alike, causing their eventual physical decay and death, and in the case of human beings, their moral, mental and spiritual deterioration as well.

 "Science views the blood-building and character-influencing urorganism water merely as a chemical compound and provides millions of people with a liquid prepared from this point of view, which is everything but healthy water."

But what does modern, de-naturised civilisation care, as long as it receives a suitably hygienised, clear liquid to shower, wash its dishes, clothes and cars. Once down the plug hole in company with all manner of toxic chemicals and detergents, all is comfortingly out of sight and out of mind. Water's subsequent treatment and sterilisation by chlorination and other processes only serve to pass on these sterilising and other degenerating effects to those organisms constantly forced to consume it. The appearance of AIDS, therefore, and the enormous increase in all forms of disease, and cancer in particular, would have come as no surprise to Viktor Schauberger for, apart from the other inevitable disturbances to the ecology and the environment occasioned by mankind's unthinking activities, he foresaw it all as early as 1933.

• "For a person who lives 100 years in the future, the present comes as no surprise."

Apart from other factors, some evasive of quantifiable definition,

which encompass such aspects as turbidity (opaqueness), impurity, and quality, the most crucial factor affecting the health and energy of water is temperature.

As a liquid, the behaviour of water differs from all others, which consistently and invariably become increasingly denser as they cool off. In contrast, water's behaviour is anomalous in that it achieves its greatest density and energetic content at a temperature of 4° Celsius—the so-called 'anomaly point', or the point of the anomalous expansion of water, which is decisive in this regard and has a major influence on its quality.

Conceived in the cool, dark cradle of the virgin forest, water ripens and matures as it slowly mounts from the depths, gathering to itself trace elements and minerals on its

upward way. Only when it is ripe, and not before, will it emerge from the bowels of the earth as a spring, which, as a true spring, in contrast to a seepage spring, has a water temperature of about 4°C. Here in the cool, diffused light of the forest it begins its long, lifegiving cycle as a sparkling, lively, translucent stream, bubbling, gurgling, whirling and gyrating as it wends its way valleywards. In its natural, self-cooling, spiralling, convoluting motion, water is able to maintain its vital inner energies, health and purity, and in this way acts as the conveyor of all the necessary minerals, trace elements and other subtle energies to the surrounding environment. Naturally flowing water seeks to flow in darkness or in the diffused light of the forest, thus avoiding the damaging direct light of the sun. Under these conditions, even when cascading down in torrents, a stream will only rarely overflow its banks; for due to its correct natural motion, the faster it flows, the greater its carrying capacity and scouring ability and the more it deepens its bed. This is due to the formation of in-winding, longitudinal, clockwise-anti-clockwise alternating spiral vortices down the central axis of the current, which constantly cool and re-cool the water, maintaining it at a healthy temperature and leading to a faster, more laminar, spiral flow.

To protect itself from harmful overexposure, water shields itself from the sun with overhanging vegetation, for with increasing heat and light it begins to lose its vitality and health, its capacity to enliven and animate the environment through which it passes. Ultimately becoming a broad river, the water becomes more turbid,

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Water in all its forms and qualities is thus the mediator of all life and deserving of the highest focus of our esteem.

the content of small-grain sediment and silt increasing as it warms up, its flow becoming slower and more sluggish. However, even this turbidity plays an important role, because it protects the deeper water strata from the heating effect of the sun. (Anyone who has dived deep into a dam in summer knows well how cold it is down below, despite high surface-water temperatures.) Being in a denser state, the colder bottom strata retain the power to shift sediment of larger grain-size (pebbles, gravel, etc.) from the centre of the watercourse, thus reducing the danger of flooding to a minimum. The spiral, vortical motion mentioned earlier, which eventually led Viktor Schauberger to the formation of his theories concerning implosion, creates the conditions where the germination of harmful bacteria is inhibited and the water remains disease-free.

In this regard, another of its life-giving properties consists in its low specific heat—lowest at 37.5°C. The term 'specific heat' refers to the capacity and rapidity of a body to absorb or release heat. Fluids with a high specific heat warm up more rapidly with a relatively small input of heat than those with a lower specific heat. How strange then, and how remarkable, that the lowest specific heat of this 'inorganic' substance—water—lies but 0.5°C above the normal 37°C blood temperature of the most highly evolved of nature's creatures—human beings. This propensity for water to resist rapid thermal change enables us, with blood composed of 80% water, to survive under large variations of temperature. Pure accident so we are told, or is it by clever, symbiotic design? However, since we are accustomed to thinking of temperature in gross terms (car engines operate at temperatures of 1,000°C or so and many industrial

processes employ extremely high temperatures), and despite the fact that we begin to feel unwell if our temperature rises by as little as 0.5°C, we fail to see that non-mechanical, organic life and health are based on very subtle differences in temperature. When our body temperature is 37°C we do not have a 'temperature' as such. We are healthy and in a state that Viktor Schauberger called "indifferent" or "temperature-less".

he highest esteem. Just as good water is the preserver of our proper bodily temperature, our anomaly point of greatest health and energy, so too does it preserve this planet as a habitat for our continuing existence. Water has the capacity to retain large amounts of heat, and were there no water vapour in the atmosphere, this world of ours would be an icy-cold, barren wasteland. Water in all its forms and qualities is thus the mediator of all

land. Water in all its forms and qualities is thus the mediator of a life and deserving of the highest focus of our esteem.

 "To be, or not to be: In nature all life is a question of the minutest, but extremely precisely graduated differences in the particular thermal motion within every single body, which continually changes in rhythm with the processes of pulsation."

 "This unique law, which manifests itself throughout nature's vastness and unity and expresses itself in every creature and organism, is the law of perpetual cycles that in every organism is linked to a certain timespan and a particular tempo."

• "The slightest disturbance of this harmony can lead to the most disastrous consequences for the major life-forms."

 "In order to preserve this state of equilibrium, it is vital that the characteristic inner temperature of each of the millions of microorganisms contained in the macro-organisms be maintained."

Oxygen is present at all forms of natural growth and decay, and whichever function it selects is determined by the temperature of the water. When the water is cool, i.e., temperature not exceeding 9°C, the oxygen contained in the water remains passive and assists in the building up of high-grade micro-organisms beneficial to life. If, however, the temperature of the water should increase above this point, then the oxygen becomes increasingly active and aggressive and inaugurates conditions suitable for the generation of diseasecarrying bacteria.

• "Thus the development of micro-organisms and the opportunities for their propagation are simply a result of the condition in which the respective sickening macro-organism finds itself, which will be attacked by these parasites and which eventually must fall victim to them if its inner climatic conditions are no longer strictly regulated."

But this aggressiveness is not confined to the creation of pathogens alone, for when water becomes overheated, due principally to the increasingly widespread clear-felling of the forest, the health-maintaining, longitudinal, vortical flow transfers into transversely acting vortices, which undermine and gouge into the riverbanks and embankment works, eventually bursting them, as well as creating pot-holes in the riverbed itself, bringing even greater disorder to the already chaotic flow profile.

According to Viktor Schauberger, water, subjected to these conditions, loses its character, its soul, and like humans of low character becomes increasingly violent and aggressive as it casts about hither and thither, seeking to vent its anger and restore to itself its former health and stability.

However, due to the senseless malpractice of the clear-felling of forests, we are destroying the very foundation of life. For with the removal of the forest, two very serious things happen:

1) During its flow to the sea, the water warms up prematurely to such an extent that it is warmed right down to the channel bed. No cool, dense, water strata remain and the sediment is left lying on the bottom, blocking the flow, dislocating the channel and resulting in the inevitable, often catastrophic floods. Yet we still have the effrontery to call these awesome events 'natural disasters', as if nature herself were responsible. Furthermore, due to the broadening of the channel, more water is exposed to the sun's heat, resulting in over-rapid evaporation to the atmosphere, in many cases overcharging it with water vapour, which it is unable to retain in suspension.

2) With the forest cover now removed, the ground also begins to heat up to temperatures much higher than normal and natural, which has a twofold effect:

a) an increase in pathogenic microbial activity, harmful to plant life, and

b) the rejection and repulsion by the warmer soil of any incident rainwater, whose temperature in this case is generally lower. Cold rain will not readily infiltrate into warm soil. This results in rapid surface run-off and no groundwater recharge.

The upshot of all this is more flooding, reduced groundwater quantity and lower groundwater-table. One flood therefore begets the next in rapid succession. But since there is no groundwater recharge, the trees, the vital retainers of water, also die, leaving the land barren and dessicated with the necessary sequel of drought.



The less the tree cover, the more extensive the flooding and the longer the period of drought, of water*less*ness, which is synonymous with life*less*ness!

Whilst unnatural, quantity-inspired forestry practices, ignorant of nature's laws, and the overwarming of the soil arising from massive deforestation are the primary causative agents for the decline in water quality, climate and the sinking of the water-table, the channelling of water through straight, unnaturally constructed, trapezoid canals, steel pipelines and other misguided systems of river regulation also forces the water to move in an unnatural way, and accelerates its own degeneration and increased disease-carrying capacity.

• "The more the engineer endeavours to channel water, of whose spirit and nature he is today still ignorant, by the shortest and straightest route to the sea, the more the flow of water settles down into bends, the longer its path and the worse the water will become."

 "The spreading of the most terrible disease of all, of cancer, is the necessary consequence of such unnatural regulatory works."

 "These mistaken activities—our work—must legitimately lead to increasingly widespread unemployment because our present methods of working, which have a purely mechanical basis, are already destroying not only all of wise nature's formative processes but, first and foremost, the growth of the vegetation itself which is being destroyed even as it grows."

 "The drying up of mountain springs, the change in the whole pattern of motion of the groundwater, and the disturbance in the blood circulation of the organism—Earth—is the direct result of modern forestry practices."

• "The pulsebeat of the earth was factually arrested by the modern timber production industry."

• "Every economic death of a people is always preceded by the death of its forests."

• "The forest is the habitat of water and, as such, the habitat of life processes too, whose quality declines as the organic development of the forest is disturbed."

• "Ultimately, due to a law which functions with awesome constancy, it will slowly but surely come around to our turn."

 "Our accustomed way of thinking, in many ways and perhaps even without exception, is opposed to the true workings of nature."

• "Our work is the embodiment of our will. The spiritual manifestation of this work is its effect. When such work is carried out correctly, it brings happiness, but when carried out incorrectly, it assuredly brings misery."

There is only one solution! Would we live and ensure a sustainable future then we must plant trees for our very lives; but, far more

importantly, we have a duty to do it for those of our children.

More immediately, however, we must care for the very limited stocks of water still available. This means treating it in the way demonstrated to us by nature. Protect it from sunlight and all heat influences. In terms of what we can achieve personally, we should at all times ensure that our storage vessels, tanks, etc., are thoroughly insulated so that the contained water is maintained at the coolest temperature possible under the prevailing conditions. Ideally, it should be placed in an enclosed, opaque and porous vessel, such as the ancient Greek, unglazed, terracotta amphora. If the porosity is correct, then for every 600th part of the contents evaporated, the contents will be cooled by 1°C, ultimately approaching a temperature of 4°C.

Viktor Schauberger (30/6/1885—25/9/1958), born in Austria of a long line of foresters stretching back some four generations, had the very great gift of accurate and intuitive observation, such that he was able to perceive the natural energies and other phenomena occurring in nature, presently unrecognised by orthodox science. Refusing to attend university at the age of 18, to the fury of his father, Viktor Schauberger left home and spent a long period alone in the high, remote forest, contemplating, pondering and observing the many subtle energetic processes taking place in nature's laboratory, where still undisturbed by human hand. During this period he developed very profound and radical theories, later to be confirmed practically, concerning water, the energies inherent in it and its desired natural form of motion. These eventually earned him the name, "The Water Wizard".

For the whole of his life he fought a running and often acrimonious battle with academia and its institutions, since his theories in the main were diametrically opposed to the so-called established facts of science. His practical demonstration of them always functioned as he had theorised, however, for he had come to understand the true inner workings of nature and was able to emulate them. His great dictum, frequently asserted, was "C²---comprehend and copy nature", for it was only thus that humanity could emerge from its present crisis-stricken condition.

Indeed, at the Stuttgart University of Technology, West Germany in 1952, these theories were tested under strict scientific and laboratory conditions by Professor Dr. Ing. Franz Pöpel, an hydraulics specialist, with the result that water, when allowed to flow in its naturally ordained manner, actually generated certain energies within it, ultimately achieving a condition that Professor Pöpel termed "negative friction".

Checked and double-checked, this well-documented, but largely unpublicised, pioneering discovery not only vindicated Viktor Schauberger's theories, but at the same time overturned the hitherto scientifically sacred 'second law of thermodynamics' in which, without further or continuous input of energy, all (closed) systems must degenerate into a condition of total chaos or entropy. These experiments proved that this law, whilst it applies to all mechanical systems, does not apply wholly to living organisms.

As a result of these discoveries, it was arranged that Viktor Schauberger be taken to the United States in 1958, where the sum of US\$650 million had been set aside as start-capital for a Los Alamoslike venture to develop Viktor Schauberger's theories of implosion. He was accompanied by his son, Walter Schauberger, a physicist and mathematician, to assist in the scientific interpretation of his father's theories. Soon after arrival, the terms of the contract were seen to be significantly at variance with those presented initially to Viktor Schauberger prior to their departure, wherein, instead of the promised three-month inaugural period, Viktor Schauberger was required to stay for eight years. Already 73 years old, he saw he would never return to Austria alive, and immediately fell silent, speaking a word to no one except to demand the return to his native land. After three months of silence this eventually took place and he and his son returned to Austria, where Viktor Schauberger died in Linz some five days later on 25th September 1958, a broken man.

On their return journey, Viktor made Walter promise to translate his theories of implosion into terms of physics, geometry and mathematics, in such manner that their veracity was irrefutable. This presented some difficulty, since, as Viktor Schauberger's concepts broke new ground, there was no adequate scientific terminology with which to describe them, and there was no form suitable to represent them or from which the necessary shapes could be precisely defined or constructed. With his own devices and apparata, Viktor Schauberger had also encountered problems of construction, which in part affected the optimum functioning of these machines, because the state and sophistication of the technology then available was insufficient and too coarse to build them properly and accurately or to reflect this necessary quality of constant change.

The vital development of a new technology, harmonious and conforming to nature's laws, demands a radical and fundamental change in our way of thinking and to our approach to the interpretation of the established doctrines and facts of physics, chemistry, agriculture, forestry and water management. As a key as to how such a new technology should come about, let me quote Viktor Schauberger once more:

• "How else should it be done then?' was always the immediate question.

The answer is simple: exactly in the opposite way that it is done today!"

NB: All the quotations were taken from Viktor Schauberger's writings during the period 1930-1933.

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THE PYTHAGORAS-KEPLER SYSTEM

The Natural Dialectic Theories Of Walter Schauberger concerning

"The Humanisation Of Technology"

Walter Schauberger, M.Sc., physicist, mathematician and founder of the Pythagoras-Kepler School for the further research, development and teaching of his father Viktor Schauberger's ideas at Bad Ischl, Austria, has worked tirelessly over the last 45 years towards the resolution of the problems set by his father's theories. Since Viktor Schauberger's concepts broke new ground, there was no adequate scientific terminology with which to describe them, and while the concepts of various non-Euclidean geometries already existed, there was no form suitable to represent Viktor Schauberger's ideas or from which the necessary shapes could be precisely defined or constructed. During this 45-year period Walter Schauberger has developed a very simple and elegant form of dialectic non-Euclidean geometry and mathematics. These succeed to a great extent in clearly and simply explaining the vortical dynamics and energetic processes of implosion, planetary motion, cyclones, etc., and from which can be derived the accurately defined egg shapes, planetary orbitals and other natural forms required for the practical realisation of Viktor Schauberger's theories.

This geometrical and mathematical system, the Pythagoras-Kepler System, is based on the harmonics of the Pythagorean monochord and the whole-numbered division of a resonating string, wherein string length and pitch, wavelength and frequency, radius and angular velocity, radius and degree of curvature, quality and quantity, egoism and altruism, are inversely proportional in the equation

> 1/n x n = 1 (1 = unity = any natural constant) (n = any integer from 0 to infinity)

in which they also find their synthesis. The principal elements of this newly interpreted Schauberger geometry, mathematics and philosophy are the rectangular hyperbola (for which the above equation is the simplest mathematical representation) and the hyperbolic spiral, whose forms describe the constantly changing curvature, dynamics and asymptotic progression required to represent nature's energetic phenomena, and in which the apparently irreconcilable aspects of continuity (evolution) and discontinuity (individuality) are united. These new harmonically-based theories, apart from interrelating such widely diverse phenomena as the formation of galaxies, tree growth, the existence of God, reality and transcendency, square roots and many other concepts which presently appear disconnected, also provide a firm basis for research and development in such areas as water purification, air pollution control and the preparation of high-quality drinking water.

Callum Coats has been studying these theories since 1977 and has held several seminars about them and their application.

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